

PATENT ABSTRACTS OF JAPAN

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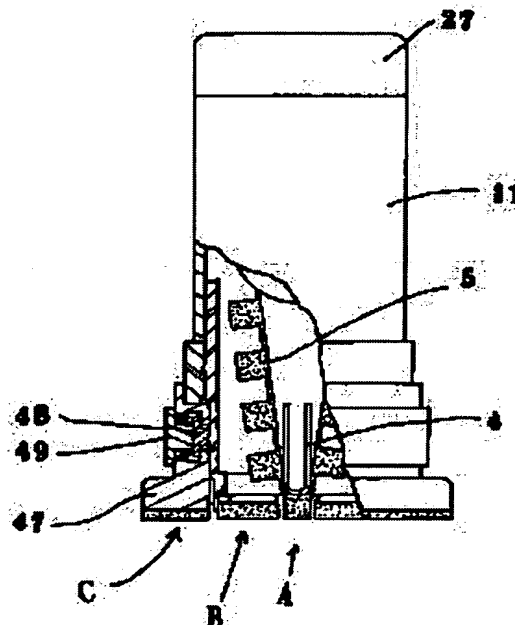
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(54) MECHANISM AND METHOD FOR REGULATING PRINTING SURFACE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a rotary seal capable of finely adjusting the heights of three printing surfaces of a printing belt, a fixed printing member and an outer peripheral printing member.

SOLUTION: In a seal wherein a seal B having a printing member held thereto is attached to a seal A having a window provided to the lower end surface thereof in a freely detachable manner and the printing member of the seal A is exposed from the window and a printing surface divided into three parts to which a seal C having a printing member provided to the lower end surface thereof is fitted and fixed is provided to the outer wall surface of the lower part of the seal A, the seal C consists of a main body having a printing member provided to the lower end surface thereof and the floating member arranged in the notch space provided in the main body and a fixing member is provided to the outer periphery of the floating member in a rotatable manner and the floating member is fixed to the lower end surface of the main body in a pressure contact state by rotating the fixing member to regulate the height of the seal C.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the height control device of the trichotomized stamp which consists of two or more printing belts and a periphery printing object of a fixed printing object further prepared in a periphery, and its approach.

[0002]

[Description of the Prior Art] The rotation mark which a printing side consists of two or more printing belts and fixed printing objects which work, and can seal coincidence in the date, a company name, a section signature, a personal name, etc. is known widely for many years, for example, is indicated by JP,3-25974,Y (it considers as (**) below.), and JP,9-277680,A (it considers as (**) below.) (stamp face of 2 division). And this kind of rotation mark is equipped with the height control device which you usually **** the rotation mark object which comes to hold two or more printing belts pivotable, and make it go up and down by the device.

[0003] However, since a printing belt and a fixed printing object are manufactured separately, in almost all cases, some error usually arises in the height of the printing parts of a printing belt and a fixed printing object. Therefore, when the printing belt and master printing object which were manufactured separately are attached, some gap arises in the height of the printing side of a printing belt, a fixed printing object, and a periphery printing object, even if it seals with the condition of having not become the same side but having attached, nonuniformity arises on print of a seal, and those printing sides cannot obtain clear print of a seal.

[0004] moreover, when a printing belt is rotated and a printing side is changed, the printing side of a printing belt and a fixed printing object and periphery printing object which were the same field before modification are no longer the same field, or The stamp face used well differs in height from the stamp face which is not used comparatively, or While the printing side of a printing belt, a fixed printing object, and a periphery printing object is no longer the same field and is using it owing to wearing out the printing side of a printing belt, and the printing side of a fixed printing object and a periphery printing object while using it for a long period of time, it becomes impossible to obtain clear print of a seal. So, (b) and (b) which are above mentioned design and invention exist in stamp face height control like a printing belt and a fixed printing object. A printing belt side is made to go up and down that it is also at a hand about a stamp, the location of a stamp face is judged and adjusted visually, trial seal is performed, and if still inadequate, again, visually, it will judge and will adjust to the height control of such a stamp face which ****ed and used the device. Moreover, even when it considers as the stamp face of not only a printing belt but 2 division as an immobilization mark, the height inequality of a stamp face arises, and the above and Hitoshi need to cut the identities of stamp face height.

[0005] On the other hand, the gestalt which establishes an annular periphery printing object which is indicated by JP,53-6509,Y, JP,53-51207,Y, and JP,48-108709,U pivotable exists in the periphery of the fixed printing object of a rotation mark which was described above. In this way, when the printing side which ****s in this invention consists of a printing belt (stamp A), a fixed printing object (stamp B), and a periphery printing object (stamp C) (stamp face of trichotomy), it also sets. Since a printing belt, a fixed printing object, and a periphery printing object are manufactured separately, respectively, Even if it attaches the printing belt and fixed printing object which were

manufactured separately, and a periphery printing object as a rotation mark. It is most that gap arises in the height of the printing side of a printing belt, a fixed printing object, and a periphery printing object, and those printing sides do not turn into the same field, and while it has been in the attached condition, even if it seals, clear print of a seal cannot be obtained. Therefore, when a printing side consists of a printing belt, a fixed printing object, and a periphery printing object, it is necessary to adjust the height of a printing side so that three printing sides, a printing belt, a fixed printing object, and a periphery printing object, may always turn into the same field.

[0006] Moreover, also when the immobilization mark is formed instead of a printing belt, since three kinds of stamp faces are processed separately, are attached and are carried out, respectively, height (stamp face location) differs. Then, it will be necessary to adjust the height of the printing side of three kinds of immobilization marks, the printing belt and fixed printing object which are not the same field, and a periphery printing object, so that always clear print of a seal can be obtained. If height is adjusted and it is not made the same field, the lowest printing side of three kinds of printing sides will collapse severely at the time of seal, and the best printing side will become a poor seal.

[0007] However, it becomes the stamp face height control approach which was described above also in such a stamp, and a periphery printing object side is made to go up and down that it is also at a hand about a stamp a printing belt and fixed printing object side again, and the location of a stamp face is judged and adjusted visually. Moreover, the height control of a periphery printing object has some in which the regulatory mechanism is not prepared from the problem of a tooth space or an approach. In such a stamp, even if it compares [that the means is not provided or] and is prepared, height is decided by viewing, and it tries and seals, and it must be attached too much from the print of a seal, an insufficient condition must be confirmed, and height must be finely tuned again by the case.

[0008]

[Problem(s) to be Solved by the Invention] However, although the height regulatory mechanism known from the former which was described above can perform fine tuning of the height of the printing side of a printing belt and a fixed printing object, the rotation mark which can tune finely the height of the printing belt and the printing side of a fixed printing object which finished fine tuning, and the printing side of a periphery printing object is not yet put in practical use.

[0009] Then, this invention can tune the height of the printing side of a printing belt or a fixed printing object, and a fixed printing object, and three printing sides of a periphery printing object finely in the stamp with which a printing side consists of a printing belt, a fixed printing object, and a periphery printing object, and it aims at offering the height control device of the stamp which can carry out the clear seal which does not always have nonuniformity. Especially, it is not based on viewing but stamp face height adjustment surely provides homogeneity with the height control device of a possible stamp easily.

[0010]

[Means for Solving the Problem] The stamp B which has an aperture in the lower limit side of Stamp A, and held the printing object is attached free [attachment and detachment]. In the stamp which prepared the stamp face of the trichotomy which is carrying out fitting immobilization of the stamp C which has exposed the printing object of Stamp A and has a printing object in the skin of the lower part section of Stamp A further from said aperture in a lower limit side Stamp C arranges a ranging behavior member to the notching space established in the interior of the body which has a printing object in a lower limit side, and said body. It is the stamp face height control device characterized by having prepared the holddown member in the periphery of this induction member pivotable, having made the lower limit side of a body carry out pressure-welding immobilization of the ranging behavior member by rotating said holddown member, and making height tone ** of Stamp C possible. Furthermore, Stamp C is [0011] to the interior of the body which has a printing object in a lower limit, and said body. Prepared notching space and the ranging behavior member is arranged possible movable in four-directions 4 direction inside said notching space. Establish the projection of a body, and the crevice stuck by pressure in said ranging behavior member at an internal surface, and a taper side is further established in the skin of said ranging behavior member. It has the holddown member inserted in the thin diameter section which is arranged at the body skin of Stamp C and is open for free passage to said notching space free [rotation]. The taper female surface which

contacts the taper male surface prepared in the skin of said ranging behavior member at the time of immobilization is prepared in the internal surface of said holddown member. It is the height control device of the stamp characterized by having carried out by rotation of said holddown member at said taper male surface, having made the skin of a body carry out pressure-welding immobilization of the ranging behavior member by the female surface, and making height control of Stamp C possible. Moreover, the approach of making a printing side the same field is the approach of making the stamp face height of each font the same by turning a printing object side down, putting a stamp on a flat side gently, sticking-by-pressure-fixing or canceling a taper male surface and a taper female surface. [0012]

[Embodiment of the Invention] The example of this invention is explained to a detail from drawing 1 , drawing 2 , drawing 3 R> 3, drawing 4 , drawing 5 , drawing 6 , drawing 7 , drawing 8 , drawing 9 , and drawing 10 . From before, it is a certain bill of materials, 1 is a KO character-like frame, the junction member 7 is fixed and formed in the upper part, and Stamp A formed the support fixed part 13 above said junction member 7 further, established the support slot 25 which supports a shaft 3 in pars intermedia, and has formed the notching 26 holding the piece 4 of support in the lower part. 2 is a rotator, and the endless printing belt 5 is hung, it is stretched, and some rotators 2 are supported to revolve pivotable with a shaft 3, and it is supported by the support slot 25. Set-up support of said endless printing belt 5 is carried out by the piece 4 of support, and the rotator 2.

[0013] 6 is a printing object with a group and consists of the frame 1 containing said junction member 7 and support fixed part 13, a shaft 3, a rotator 2, a piece 4 of support, and an endless printing belt 5. It is the support actuation section, and 8 prepares taper male surface 45A in the front face of said support fixed part 13, and further, taper female surface 46B is prepared in the bore side of said support actuation section 8, and said support actuation section 8 rotates, and it carries out contact support with said taper male surface 45A. And if said support actuation section 8 is rotated, taper male surface 45A and taper female surface 46B will stick each other perpendicularly (the direction of a perpendicular flat surface) by pressure to an axis, and fixed support of the printing object 6 with a group will be carried out. Taper male surface 45A and page [2nd] taper female surface 46B are prepared at a time in the location which faces across recess space by both in same number ***** and this example.

[0014] Thereby, the immobilization mark 12 and the endless printing belt 5 are placed upside down, and alignment of the stamp face of the immobilization mark 12 and the endless printing belt 5 is made into the same field, as described above, the support actuation section 8 is rotated, fixed maintenance is carried out in the support fixed part 13, and it is put on flat sides, such as paper, and carries out fixed maintenance in the location of said printing object 6 in this way. Moreover, the charge fixing collar 21 of the support actuation section 8 was contacted in the elastic member 9, and said charge fixing collar 21 is always in contact with the upper part opening edge (contact shelf) of the sheathing object 11 further. Here, the stamp face regulatory mechanism of the screw type from the former is also usable as a stamp face regulatory mechanism. When the stamp face regulatory mechanism of a screw type is used for height adjustment with the printing object 6 (stamp A) and a fixed printing object (stamp B), a fixed printing object (stamp B) and a periphery printing object (stamp C) can put on the above-mentioned flat side, and can make stamp face height the same.

[0015] 9 is an elastic member and what is used is a compression coil spring. An elastic member 9 has the operation which from-cartridge-moves the sheathing object 11 for the printing object 6 to the upper part between the beginnings caudad. Moreover, the inferior surface of tongue of the charge fixing collar 21 for which the edge was contacted by the cover plate 30 and which described the another side edge above on the other hand of an elastic member 9 was contacted, and resiliency is given to the printing object 6, the support actuation section 8, and the sheathing object 11.

[0016] 10 is a tubed body and the opening aperture 23 which a pair faces is formed in the mid-position. Moreover, there is a piece 14 of a guide and, up, the hole 41 and the induction projection 17 are formed. The engagement section 28 is formed in the lower part section of said body 10, and the fixed mark carrier 20 which has Stamp B (immobilization mark 12) is being engaged free [attachment and detachment]. Moreover, the printing object 6 is arranged on the interior of a body 10, and said printing object 6 is established for the endless printing belt 5, enabling free vertical sliding until it reaches an upper part location from the aperture 22 of the fixed mark carrier 20.

Moreover, it engages with the engagement guide peg 29 which has formed four holes 41 in the upper part of said body 10, and was stretched by one side of a cover plate 30. The engagement guide peg 29 is a hole 41 and same number *****.

[0017] A cover plate 30 is a plate of a doughnut configuration, attached said cover plate 30 to the upper part opening edge of a body 10, and has always exposed the support actuation section 8 from the hole 19. 11 is a tubed sheathing object, the controller cap 27 is made to attach free [attachment and detachment], and the guide slot 15 is established in the wall of said sheathing object 11 so that the up aperture of an upper part opening edge may be covered. The induction projection 17 is located in the fixed end of the guide slot 15, the sheathing object 11 and the body 10 are being engaged, and said sheathing object 11 has always covered the opening aperture 23 (not shown). Contact induction of the induction projection 17 is carried out in said guide slot 15.

[0018] the initial state attached especially as the approach of the stamp face height control of Stamp A and Stamp B -- setting -- ** -- since it is needed after the endless printing belt 5 exchanges the disclosure printing object from an aperture 22, and the controller cap 27 is removed, then the support actuation section 8 is exposed -- said support actuation section 8 -- right and left -- either is rotated. If it is made to rotate the support actuation section 8, sticking-by-pressure immobilization of the taper male surface 45 and the taper female surface 46 will be carried out, and if the reverse is rotated, it will become sticking-by-pressure discharge. In the condition of sticking-by-pressure immobilization, the sticking-by-pressure force is added perpendicularly (the direction of a perpendicular flat surface) to an axis by the taper male surface 45 and the taper female surface 46, and it will be in a fixed condition.

[0019] Next, if said support actuation section 8 rotates in the direction in which the taper male surface 45 and the taper female surface 46 are mutually pulled apart about a discharge condition, the sticking-by-pressure force to a perpendicular direction is lost to the above mentioned axis, and vertical sliding is possible for the printing object 6. Here, the from cartridge of the support actuation section 8 is carried out to information by the elastic member. However, this support actuation section 8 is contacted by the collar of the opening aperture 23. A flat field is made to carry out standing of the Stamp B and Stamp A printing object disclosure-side in the state of discharge. Then, it becomes conditions for the height of the printing object of Stamp A and Stamp B to become always the same, and obtain uniform print of a seal. And if the support actuation section 8 is again rotated in the direction which carries out sticking-by-pressure immobilization, as for support fixed part *****, this stamp face can fix the location of the printing object 6 in the same location. In this way, sticking-by-pressure immobilization and discharge of a support fixed part and the support actuation section 8 are attained.

[0020] Moreover, in order to change the endless printing belt 5 of Stamp A, the sheathing object 11 is rotated towards first discharge, and the induction projection 17 is located in the location of the guide slot 15 on vertical to an axis. Then, since the elastic member 9 is in contact with the charge fixing collar 21 of the support actuation section 8 and the charge fixing collar 21 is further in contact with the upper part opening edge (contact shelf) of the sheathing object 11, while moving said sheathing object 11 up, the assembly printing object 6 whole is pulled up up. Then, the printing object exposed from the aperture 22 moves up, it is located in the upper part from said aperture 22, and the printing object of the endless printing belt 5 can be changed. What is necessary is to operate it contrary to the above and just to return to the original condition, after changing the printing object of said endless printing belt 5.

[0021] Although not shown in drawing as another example of Stamp A, it is the stamp which transposed the part of the endless printing belt 5 to the shank attachment mark or another immobilization mark. Such Stamp A (printing object) and Stamp B need to perform height adjustment of a stamp face like the above. It is the combination of the immobilization mark (stamp A) and the immobilization mark (stamp B).

[0022] Stamp B (fixed mark object 12) sticks a printing object on the fixed mark carrier 20, and is formed in it. In this example, if it is a continuation porous body, and printing objects are rubber, thermoplastics, a ceramic, etc. and are continuation porous bodies, they will not be asked. Moreover, although the printing object is stuck on the direct fixed mark carrier 20, it is also possible to receive a printing object and to hold by the member.

[0023] About the stamp C of the example of this invention, in the condition of having been put together, it is the trichotomy stamp face of Stamp A, Stamp B, and Stamp C, and in the case of the stamp C of this invention, especially 47 is the body of Stamp C, is carrying out the shape of a cylinder, and holds the printing object on the inferior surface of tongue. The notching space 50 is established in the thin diameter section 55 (between an outer wall and walls) of the body 47 of said stamp C, said notching space 50, outer wall of a body 47, and wall are opened for free passage with the hole, and the ranging behavior member 48 is arranged by the part from which the interior of the notching space 50 serves as big space.

[0024] This invention is just going to mean that the notching space 50 is established in the location which faces two places, and drawing of this example prepares some in the location which faces, respectively. Maintenance becomes certainly possible by forming two or more ranging behavior members 48. Moreover, the rotation ranging behavior slot 54 which holds a holddown member 49 rotatable to vertical parallel along with said thin diameter section 51 is formed. The key seat 58 is formed in the body 47 of Stamp C at the lower part section of a key 59 and a body 10 for positioning of rotation prevention of the body 47 of said stamp C, and the stamp face of Stamps A, B, and C.

[0025] 48 is a gestalt which forms the shape of a part of radii by the ranging behavior member as described above. The notching space 50 has the tooth space of a like on which it can slide freely vertically and horizontally for the ranging behavior member 48. Furthermore, the crevice 52 which contacts the projected part 34 of a body 10 is established in the internal surface of the ranging behavior member 48, and the taper male surface 45 is formed in the skin. Although arranged in the location where two components face this example, it is also at ***** of this invention, and the time to prepare in the location which suits focusing on some and is made to counter the other side.

[0026] 49 is a holddown member which is the gestalt which forms the shape of a part of radii, and makes one periphery with the two same components in this example. The taper female surface 46 is formed in the center in the shape of a periphery at the internal surface of said holddown member 49, and the rotation supporter 53 is further formed in the both sides of the taper female surface 46. Although said rotation supporter 53 is formed in **** by a diagram, it may be in the condition in which the shape of discontinuous radii was formed. Moreover, said rotation supporter 53 holds and escapes from rotation of a holddown member 49, and is in the stop condition. Said rotation supporter 53 is inserted in the rotation induction slot 54 established in the body 47 of said stamp C, and a holddown member 49 is held in the shape of an omission stop free [rotation].

[0027] Next, pressure-welding immobilization of the taper female surface 46 and the taper male surface 45 is always carried out horizontally (as opposed to an axis) about the approach of the height control of the stamp face of Stamp C, and the stamp face of Stamp A and Stamp B. And the ranging behavior member 48 is pressed in the direction of a core of a stamp, and pressure-welding immobilization is carried out in the lower limit side of a body 10. At this time, it is stuck by pressure with the crevice 52 of the internal surface of said ranging behavior member 48, and the projected part 34 of a body.

[0028] a holddown member 49 -- right and left -- if either is rotated, the aforementioned pressure-welding condition will be canceled. At this time, the stamp face of Stamp C, Stamp B, and Stamp A is turned down, and it puts on a flat surface. Then, the stamp face of Stamp C will become the same location (flat surface) as this with a self-weight, if Stamp A and Stamp B are already the same sides. the body 47 of Stamp C -- the upper and lower sides -- although it moves to either and stamp face height is made the same, since the projected part of a body 10 and the crevice 52 of said ranging behavior member have contacted, only the ranging behavior member 48 does not move. If a stamp face turns into the same side, a holddown member 49 will be rotated in as reverse the direction as the point, again, the taper female surface 46 and the taper male surface 45 of a holddown member 49 are horizontal, pressure-welding immobilization is carried out, and pressure-welding immobilization of the ranging behavior member 48 is carried out further in the lower limit side of a body 10. As drawing 10 shows especially this actuation, originally it is alike on the shape of a periphery, and although this drawing is arranged, it expresses superficially here. Originally the horizontal plane passes in the vertical direction. Drawing on drawing 10 is in the condition that pressure-welding immobilization of the taper male surface was carried out by the taper female surface, and a stamp is in the fixed condition. Drawing under drawing 10 is in the condition that the taper male surface was

canceled by the taper female surface, and is in the condition whose stamp face height control of a stamp becomes possible.

[0029]

[Effect of the Invention] Since it is the above configurations, the stamp with which this invention has two or more kinds of printing objects like the printing object of Stamp A, the printing object of Stamp B, and the printing object of Stamp C needs to make the height of a stamp face the same, and can adjust it to accuracy more using a flat side. In this way, print of a seal with the adjusted clear stamp is obtained. Moreover, this actuation can also perform easily pressure-welding immobilization or discharge of a taper male surface and a taper female surface.

[0030]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] The example of this invention is a fracture surface Fig. a part.

[Drawing 2] The perspective view of the stamp A of the example of this invention, and Stamp B.

[Drawing 3] The stamp A of the example of this invention and Stamp B are a decomposition perspective view a part.

[Drawing 4] The decomposition perspective view of the stamp C of the example of this invention.

[Drawing 5] The transverse-plane half section Fig. of the stamp C of the example of this invention.

[Drawing 6] The side-face half section Fig. of the stamp C of the example of this invention.

[Drawing 7] The explanatory view of the fixed condition of the stamp C of the example of this invention.

[Drawing 8] The explanatory view of the upper part location condition of the stamp C of the example of this invention.

[Drawing 9] The explanatory view of the lower part location condition of the stamp C of the example of this invention.

[Drawing 10] The explanatory view of the pressure welding and separation condition of the taper male surface of the example of this invention, and a taper female surface.

[Description of Notations]

- 1 Frame
- 2 Rotator
- 3 Shaft
- 4 Piece of Support
- 5 Endless Printing Belt
- 6 Printing Object with Group
- 7 Junction Member
- 8 Support Actuation Section
- 9 Elastic Member
- 10 Body
- 11 Sheathing Object
- 12 Fixed Mark Object
- 13 Support Fixed Part
- 14 Piece of Guide
- 17 Induction Projection
- 19 Hole
- 22 Aperture
- 23 Opening Aperture
- 25 Support Slot
- 26 Notching
- 27 Controller Cap
- 29 Engagement Guide Peg
- 30 Cover Plate
- 34 Projected Part
- 41 Hole

45 Taper Male Surface
46 Taper Female Surface
47 Body of Stamp C
48 Ranging Behavior Member
49 Holddown Member
50 Notching Space
51 Thin Diameter Section
52 Crevice
53 Rotation Supporter
54 Rotation Ranging Behavior Slot

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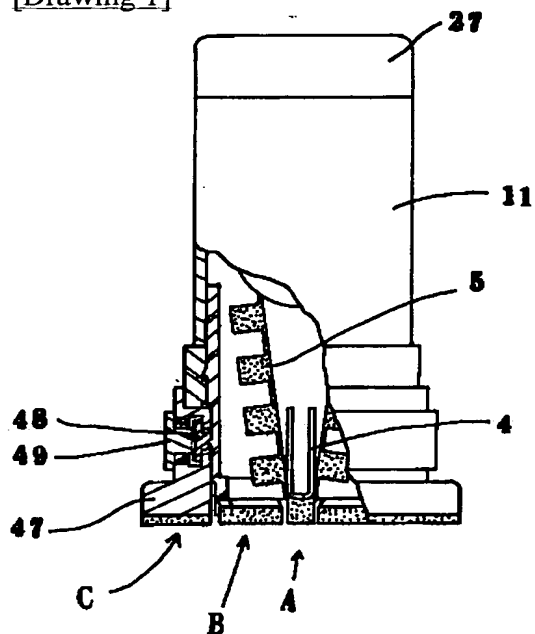
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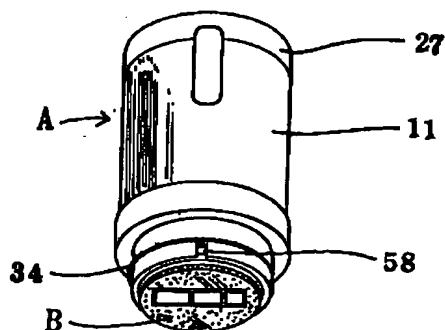
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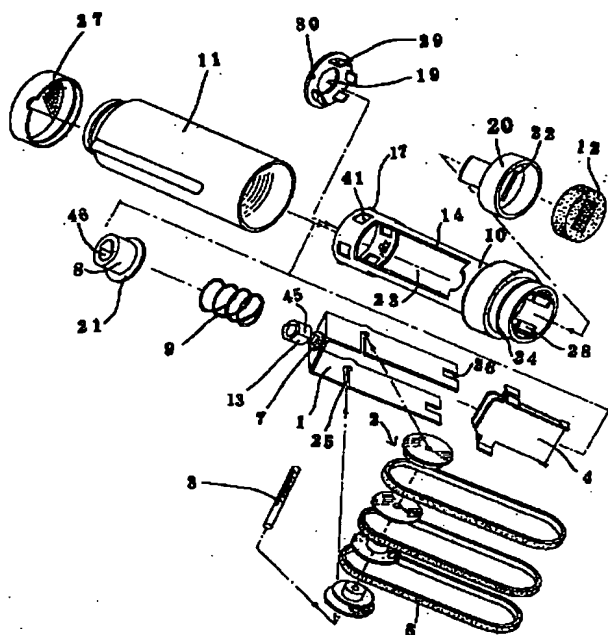
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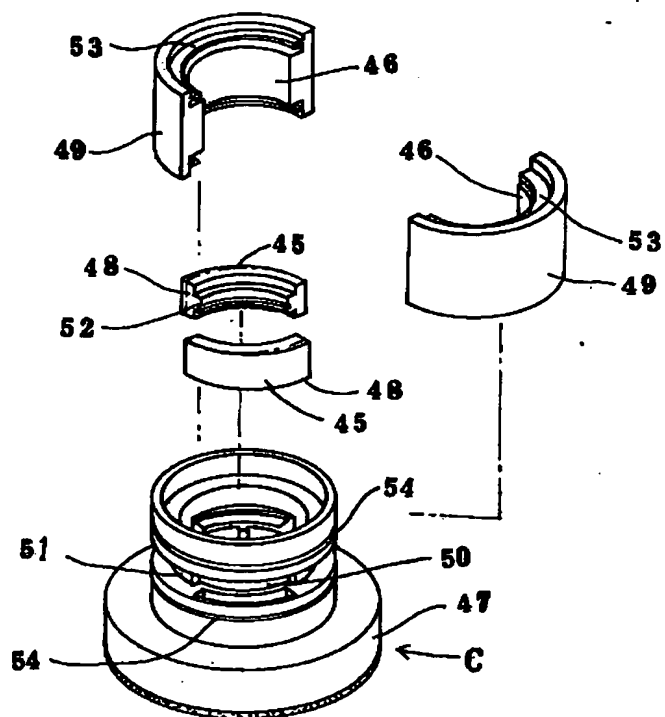
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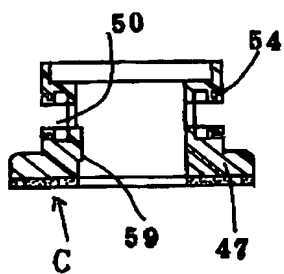
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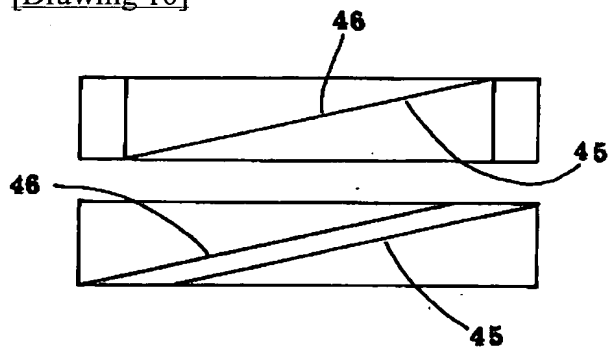
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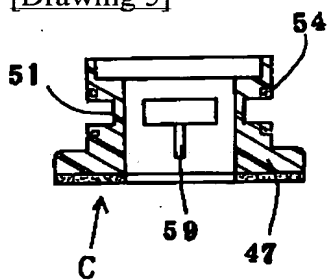
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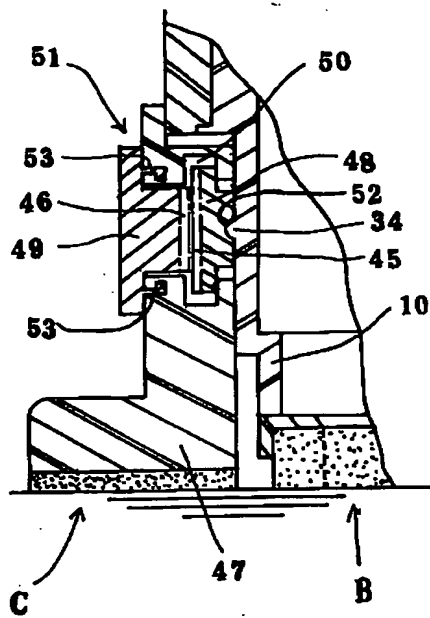
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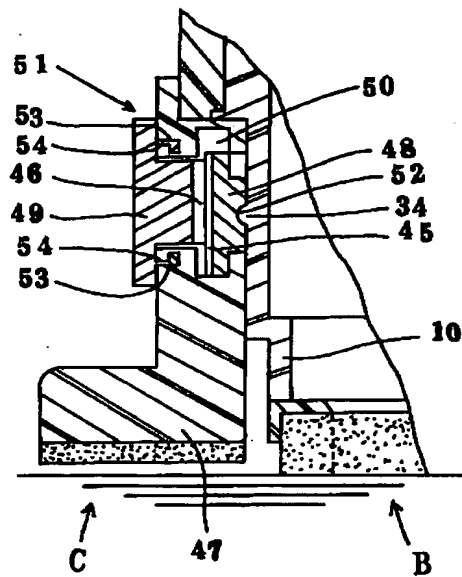
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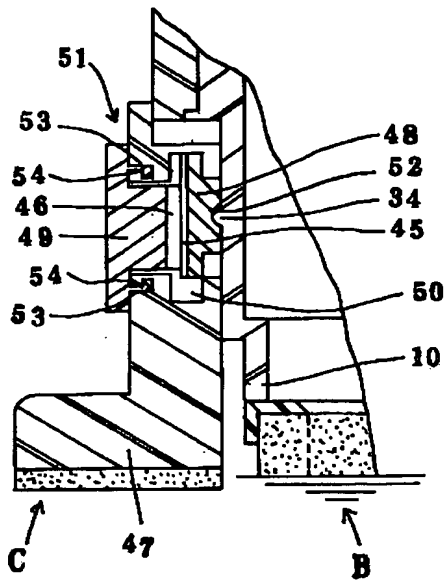
[Drawing 7]



[Drawing 8]



[Drawing 9]



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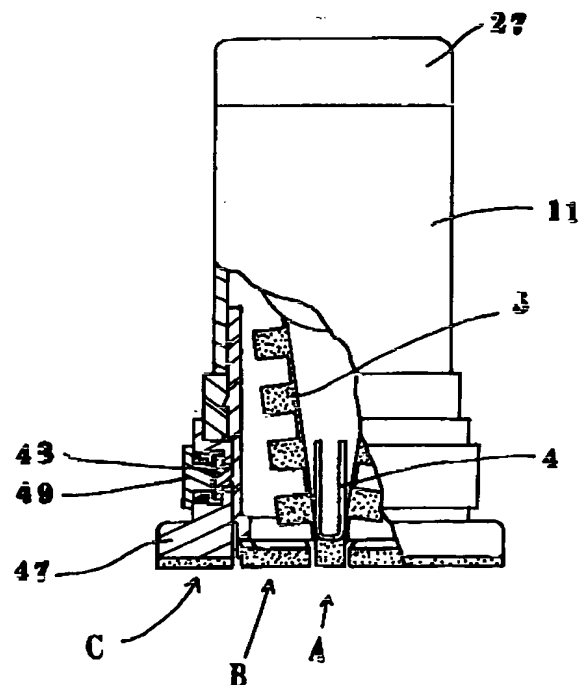
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ヤチハタ工業株式会社内

(54) 【発明の名称】 印面高さ調節機構及びその方法

(57) 【要約】

【課題】 印字ベルトと固定印字体と外周印字体の3つの印字面の高さを微調整することができる回転印を提供する。

【解決手段】 印判Aの下端面には窓を有し印字体を保持した印判Bが着脱自在に取付けられており、前記窓より印判Aの印字体を露呈しており、更に印判Aの下方部の外壁面には下端面に印字体を有する印判Cを嵌合固定している3分割の印面を設けた印判において、印判Cは下端面に印字体を有する本体と前記本体の内部に設けられた切欠空間に遊動部材を配置し、この誘導部材の外周には固定部材を回転可能に設け、前記固定部材を回転させることにより遊動部材を本体下端面に圧接固定させ印判Cの高さ調節を可能としたことを特徴とした印面高さ調節機構である。



【特許請求の範囲】

【請求項1】 印判Aの下端面には窓を有し印字体を保持した印判Bが着脱自在に取付けられており、前記窓より印判Aの印字体を露呈しており、更に印判Aの下方部の外壁面には下端面に印字体を有する印判Cを嵌合固定している3分割の印面を設けた印判において、印判Cは下端面に印字体を有する本体と前記本体の内部に設けられた切欠空間に遊動部材を配置し、この誘導部材の外周には固定部材を回転可能に設け、前記固定部材を回転させることにより遊動部材を本体下端面に圧接固定させ印判Cの高さ調節を可能としたことを特徴とした印面高さ調節機構。

【請求項2】 印判Cは下端に印字体を有する本体と前記本体の内部に切欠空間を設け、前記切欠空間の内部には遊動部材を上下左右4方向に可動可能に配置しており、前記遊動部材には内壁面に本体の突起と圧着する凹部を設けて、更に前記遊動部材の外壁面にテーパ面を設け、印判Cの本体外壁面に配置され前記切欠空間に連通する細径部に回転自在に嵌め込まれる固定部材を有し、前記固定部材の内壁面には前記遊動部材の外壁面に設けたテーパ雄面と固定時に当接するテーパ雌面が設けられ、前記固定部材の回転により前記テーパ雄面、雌面により遊動部材を本体の外壁面に圧接固定させ印判Cの高さ調節を可能としたことを特徴とする請求項1の印判の高さ調節機構。

【請求項3】 請求項1、請求項2のうち1つの印判を印字体側を下にしてフラット面に静置してテーパ雄面とテーパ雌面を圧着固定又は解除することにより各字体の印面高さを同一にする印面高さ調節方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、複数の印字ベルトと固定印字体の更に外周に設けられる外周印字体とからなる3分割された印判の高さ調節機構及びその方法に関するものである。

【0002】

【従来の技術】 印字面が複数の移動する印字ベルトと固定印字体とからなり、日付と社名・部署名・個人名等を同時に捺印することができる回転印は古くから広く知られており、例えば実公平3-25974号（以下(イ)とする。）や特開平9-277680号（以下(ロ)とする。）に開示されている（2分割の印面）。そして、この種の回転印は通常、複数の印字ベルトを回転可能に保持してなる回転印体をねじ機構で昇降させる高さ調節機構を備えている。

【0003】 しかし通常、印字ベルトと固定印字体は別々に製造されるため、ほとんどの場合は印字ベルトと固定印字体の印字部分の高さに若干の誤差が生じるものである。従って、別々に製造された印字ベルトとマスター印字体を組み付けた際、印字ベルトと固定印字体、外周

印字体の印字面の高さに若干のズレが生じてそれらの印字面は同一面にならず、組み付けた状態のままで捺印したとしても印影にムラが生じてしまい、鮮明な印影を得ることができない。

【0004】 又、印字ベルトを回転させて印字面を変更した際に、変更前には同一面であった印字ベルトと固定印字体の印字面及び外周印字体が同一面でなくなったり、良く使用する印面と比較的使用しない印面とでは高さが異なってきたり、長期間使用しているうちに印字ベルトの印字面や固定印字体及び外周印字体の印字面が摩耗したりすることが原因で印字ベルトと固定印字体及び外周印字体の印字面が同一面でなくなったりして、使用しているうちに鮮明な印影を得ることができなくなる。そこで印字ベルトと固定印字体のような印面高さ調節には前記した考案・発明である（イ）、（ロ）が存在する。こうしたねじ機構を使用した印面の高さ調節には、印判を手でもって印字ベルト側を上下させて印面の位置を目視にて判断して調節し、試し捺印を行ってまだ不十分であれば再度目視にて判断して調整するものである。また、印字ベルトだけではなくて固定印として2分割の印面とした場合でも印面の高さ不一致が生じ、印面高さの同一を前記と同様はかる必要がある。

【0005】 一方、前記したような回転印の固定印字体の外周に、実公昭53-6509号や実公昭53-51207号や実開昭48-108709号に開示されているような環状の外周印字体を回転可能に設ける形態が存在する。こうして、本発明に相応する印字面が印字ベルト（印判A）と固定印字体（印判B）と外周印字体（印判C）とからなる（3分割の印面）場合においても、印字ベルトと固定印字体と外周印字体はそれぞれ別々に製造されるため、別々に製造された印字ベルトと固定印字体と外周印字体を回転印として組み付けたとしても、印字ベルトと固定印字体と外周印字体の印字面の高さにズレが生じてそれらの印字面は同一面にならないのがほとんどであり、組み付けた状態のままで捺印したとしても鮮明な印影を得ることはできない。従って、印字面が印字ベルトと固定印字体と外周印字体とからなる場合においても、印字ベルトと固定印字体と外周印字体の3つの印字面が常に同一面になるように印字面の高さを調整する必要がある。

【0006】 また、印字ベルトの代わりに固定印を設けた場合にも、夫々3種類の印面を別々に加工し組み付けるので高さ（印面位置）が異なる。そこで、常時鮮明な印影を得ることができるように、同一面でない印字ベルトと固定印字体と外周印字体の3種類の固定印の印字面の高さを調整する必要が生じる。高さを調節し同一面にしないと3種類の印字面の最下印字面が捺印時にひどく潰れてしまい、最上印字面が捺印不良となる。

【0007】 しかし、こうした印判においても前記したような印面高さ調節方法となり、印判を手でもって印字

ベルト側及び固定印字体側また外周印字体側を上下させて印面の位置を目視にて判断して調節する。また外周印字体の高さ調節はスペースや方法の問題より調節機構が設けられていないものもある。こうした印判では手段が講じられていないばかりか例え設けられたとしても高さを目視により決めて試し捺印して、その印影から付きすぎ、不足の具合を確かめ場合により再度高さを微調整しなければならない。

【0008】

【発明が解決しようとする課題】ところが、印字ベルトと固定印字体の印字面の高さの微調整は前記したような従来より知られている高さ調節機構により行なうことができるが、微調整を済ませた印字ベルトと固定印字体の印字面と外周印字体の印字面の高さを微調整することができる回転印は未だ実用化されていない。

【0009】そこで、本発明は印字面が印字ベルトと固定印字体と外周印字体とからなる印判において、印字ベルトもしくは固定印字体と固定印字体の印字面と外周印字体の3つの印字面の高さを微調整することができ、常時ムラのない鮮明な捺印をすることができる印判の高さ調節機構を提供することを目的とする。特には、目視によらず必ず均一に印面高さ調整が容易に可能な印判の高さ調節機構を提供するものである。

【0010】

【課題を解決するための手段】印判Aの下端面には窓を有し印字体を保持した印判Bが着脱自在に取付けられており、前記窓より印判Aの印字体を露呈しており、更に印判Aの下方部の外壁面には下端面に印字体を有する印判Cを嵌合固定している3分割の印面を設けた印判において、印判Cは下端面に印字体を有する本体と前記本体の内部に設けられた切欠空間に遊動部材を配置し、この誘導部材の外周には固定部材を回転可能に設け、前記固定部材を回転させることにより遊動部材を本体下端面に圧接固定させ印判Cの高さ調節を可能としたことを特徴とした印面高さ調節機構であり、更に、印判Cは下端に印字体を有する本体と前記本体の内部に

【0011】切欠空間を設け、前記切欠空間の内部には遊動部材を上下左右4方向に可動可能に配置しており、前記遊動部材には内壁面に本体の突起と圧着する凹部を設けて、更に前記遊動部材の外壁面にテーパ面を設け、印判Cの本体外壁面に配置され前記切欠空間に連通する細径部に回転自在に嵌め込まれる固定部材を有し、前記固定部材の内壁面には前記遊動部材の外壁面に設けたテーパ雄面と固定時に当接するテーパ雌面が設けられ、前記固定部材の回転により前記テーパ雄面、雌面により遊動部材を本体の外壁面に圧接固定させ印判Cの高さ調節を可能としたことを特徴とする印判の高さ調節機構である。また印字面を同一面とする方法は、印判を印字体側を下にしてフラット面に静置してテーパ雄面とテーパ雌面を圧着固定又は解除することにより各

字体の印面高さを同一にする方法である。

【0012】

【発明の実施の形態】本発明の実施例を図1、図2、図3、図4、図5、図6、図7、図8、図9、図10より詳細に説明する。印判Aは、従来よりある部品構成で、1は、コ字状の枠体であり上部には中継部材7が固定して設けられており、更に前記中継部材7の上方には支持固定部13を設け中間部に軸3を支持する支持溝25を設け、下部には支持片4を保持する切欠26を設けている。2は、回転子であり、無端印字ベルト5が掛けられ張設されており、数個の回転子2を軸3により回転可能に軸支されて、支持溝25に支持されている。前記無端印字ベルト5は、支持片4と回転子2により張設支持されている。

【0013】6は、組付印字体であり、前記中継部材7と支持固定部13を含む枠体1、軸3、回転子2、支持片4、及び無端印字ベルト5よりなるものである。8は、支持作動部であり、前記支持固定部13の表面にはテーパ雄面45Aを設け、更に、テーパ雌面46Bを前記支持作動部8の内径面に設け、前記支持作動部8が回転して前記テーパ雄面45Aと当接支持する。そして、前記支持作動部8を回転させると、テーパ雄面45Aとテーパ雌面46Bが軸線に対して垂直方向（垂直平面方向）に圧着し合って組付印字体6が固定支持される。テーパ雄面45A、テーパ雌面46Bは、どちらも同数設けられており、本実施例においては、逃げ空間を挟んで相対する位置に2面づつ設けられている。

【0014】これにより、固定印12と無端印字ベルト5の印面の位置合わせは、固定印12、無端印字ベルト5を下向きにして紙等のフラット面に置き、同一面にして前記したように支持作動部8を回転させ支持固定部13を固定保持し、こうして前記印字体6の位置を固定保持する。また、弾性部材9を支持作動部8の係止鉤21に当接し、更に、前記係止鉤21は外装体11の上方開口端（当接棚）に常時は当接している。ここで、印面調節機構として従来からの螺子式の印面調節機構も使用可能である。印字体6（印判A）、固定印字体（印判B）との高さ調整に螺子式の印面調節機構を使用した場合は、固定印字体（印判B）と外周印字体（印判C）とが上記のフラット面に置き、印面高さを同一にすることが出来る。

【0015】9は、弾性部材であり、使用するのは圧縮コイルスプリングである。弾性部材9は、印字体6を下方に外装体11を最初の間上方に弾発移動させる作用を有する。また、弾性部材9の一方端は蓋板30に当接され、他方端は前記した係止鉤21の下面に当接し、印字体6、支持作動部8、外装体11に弾発力を与えている。

【0016】10は、筒状の本体であり、中間位置には

一対の相対する開口窓23が設けられている。また、ガイド片14があり上方には孔41と誘導突起17が設けられている。前記本体10の下方部には係合部28が設けられ、印判B（固定印12）を有する固定印受20が、着脱自在に係合している。また、本体10の内部には印字体6を配しており、無端印字ベルト5を固定印受20の窓22より上方位置に至るまで前記印字体6を上下摺動自在に設けている。また、前記本体10の上部には孔41を4ヶ所設けており蓋板30の片面に張設された係合足29と係合する。係合足29は孔41と同数設けられている。

【0017】蓋板30はドーナツ形状の板であり、本体10の上方開口端に前記蓋板30を組み付けて孔19より支持作動部8を常に露呈している。11は、筒状の外装体であり、上方開口端の上部窓を覆い隠すように調節部キャップ27を着脱自在に嵌着させており、前記外装体11の内壁にはガイド溝15が設けられている。前記外装体11は、常時は誘導突起17がガイド溝15の固定端に位置しており外装体11と本体10が係合しており、開口窓23（図示していない）を覆っている。誘導突起17は、前記ガイド溝15に当接誘導される。

【0018】印判Aと印判Bの印面高さ調節の方法としては、特に組み付けた初期状態においてと、無端印字ベルト5が窓22からの露呈印字体を交換したあとに必要となり、調節部キャップ27を取り除く、すると支持作動部8が露呈されているので、前記支持作動部8を左右どちらかに回転をさせる。支持作動部8を回転をさせるとテーパ雄面45、テーパ雌面46の圧着固定され、その逆に回転させると圧着解除となる。圧着固定の状態において、テーパ雄面45とテーパ雌面46により軸線に対して垂直方向（垂直平面方向）に圧着力が加わり固定状態となる。

【0019】次に解除状態についてテーパ雄面45とテーパ雌面46が相互に引き離される方向に前記支持作動部8が回転すると、前記した軸線に対し垂直方向への圧着力がなくなり印字体6は、上下摺動可能となっている。ここで、弾性部材により支持作動部8は情報に弾発される。しかし、この支持作動部8は開口窓23の鏝に当接されている。解除状態で印判Bと印判Aの印字体露呈側をフラットな面に静置させる。すると印判Aと印判Bの印字体の高さが常に同一となり均一な印影が得られる為の条件となる。そして、再度支持作動部8を圧着固定する方向に回転させるとこの印面が同一位置で支持固定部ひいては印字体6の位置を固定することができる。こうして支持固定部と支持作動部8は、圧着固定と解除が可能となる。

【0020】また印判Aの無端印字ベルト5を変える為には、外装体11をまず解除の方向に回転させ、軸線に対して垂直方向のガイド溝15の位置に誘導突起17を位置させる。すると、弾性部材9が支持作動部8の係止

鏝21に当接しており、係止鏝21は更に外装体11の上方開口端（当接棚）と当接しているのので、前記外装体11を上方に移動させるとともに組立印字体6全体を上方に引き上げる。すると、窓22から露呈していた印字体が上方に移動し前記窓22から上方に位置し、無端印字ベルト5の印字体を変えることができる。前記無端印字ベルト5の印字体を変えた後は上記とは逆に操作して元の状態に戻せばよい。

【0021】印判Aの別の実施例としては図には示していないが、無端印字ベルト5の部分を柄付け印や別の固定印に置き換えた印判である。こうした印判A（印字体）と印判Bも上記と同様印面の高さ調整を行なう必要がある。固定印（印判A）と固定印（印判B）の組み合わせである。

【0022】印判B（固定印体12）は、固定印受20に印字体を貼り付けて設けられている。本実施例では印字体は連続多孔質体であり、ゴム、熱可塑性樹脂、セラミック等であり、連続多孔質体であれば問わない。また印字体を直接固定印受20に貼り付けているが印字体を受け部材で保持することも可能である。

【0023】本発明の実施例の印判Cについて、組み合わせられた状態では印判Aと印判Bと印判Cの3分割印面であり、特に本発明の印判Cの場合、47は印判Cの本体であり円筒状をしており、下面に印字体を保持している。前記印判Cの本体47の細径部55（外壁と内壁の間）には切欠空間50を設けており、前記切欠空間50と本体47の外壁と内壁は孔により連通されており、切欠空間50の内部は大きな空間となっている部分に遊動部材48が配設されている。

【0024】本実施例の図は、切欠空間50は2ヶ所相対する位置に設けられており、数個を夫々相対する位置に設けることも本発明の意図するところである。2個以上の遊動部材48を設けることにより確実に保持可能となる。また、前記細径部51に沿って上下平行に固定部材49を回転可能に保持する回転遊動溝54を設けている。前記印判Cの本体47の回転防止と印判A、B、Cの印面の位置決めのために、印判Cの本体47にキー59と本体10の下方部にキー溝58を設けている。

【0025】48は、前記したように遊動部材で円弧状の一部を形成する形態である。切欠空間50は、遊動部材48を上下左右に摺動自在な程のスペースを有するものである。更に遊動部材48の内壁面には、本体10の突部34に当接する凹部52を設けており、外壁面にはテーパ雄面45が設けられている。本実施例には2部品が相対する位置に配置されているが、数個を中心に向かい合い向かいに向向させる位置に設けることも本発明の意図するところである。

【0026】49は、円弧状の一部を形成する形態である固定部材であり、本実施例では同じ2部品で1つの円周をなすものである。前記固定部材49の内壁面には中

央にテーパー雌面46が周状に設けられ、更にテーパー雌面46の両側に回転支持部53が設けられている。前記回転支持部53は、図では周条に設けられているが不連続な円弧状を形成した状態であっても良い。また、前記回転支持部53は、固定部材49の回転を保持し、抜け止め状態となっている。前記印判Cの本体47に設けた回転誘導溝54に前記回転支持部53が挿入され、回転自在に抜け止め状に固定部材49を保持する。

【0027】次に、印判Cの印面と印判Aと印判Bの印面の高さ調節の方法について、常時はテーパー雌面46とテーパー雄面45が水平方向（軸線に対して）に圧接固定されている。そして、遊動部材48は、印判の中心方向に押圧され、本体10の下端面に圧接固定されている。この時、前記遊動部材48の内壁面の凹部52と本体の突部34と圧着している。

【0028】固定部材49を左右どちらかに回転させると前記の圧接状態が解除される。この時、印判C、印判B、印判Aの印面を下にして平面上に静置する。すると印判Cの印面は既に印判Aと印判Bが同一面であればこれと同じ位置（平面）に自重によりなる。印判Cの本体47が上下どちらかに移動して印面高さを同一にするが、遊動部材48だけは本体10の突部と前記遊動部材の凹部52が当接しているので動かない。印面が同一面になったならば固定部材49を先ほどとは逆の方向に回転させ、再度固定部材49のテーパー雌面46とテーパー雄面45が水平方向で圧接固定され、更に遊動部材48は、本体10の下端面に圧接固定されている。特にこの作動について図10で示すように、本来円周状の上にはこの図は配置されているがここでは平面的に現している。上下方向に本来水平面が通っている。図10の上の図は、テーパー雌面によりテーパー雄面が圧接固定された状態であり、印判は固定された状態である。図10の下図は、テーパー雌面によりテーパー雄面が解除された状態であり、印判の印面高さ調節が可能となる状態である。

【0029】

【発明の効果】以上のような構成であるので、本発明は印判Aの印字体、印判Bの印字体、印判Cの印字体のように2種類以上の印字体を有する、印判は印面の高さを同一にする必要があり、フラット面を使用してより正確に調整できる。こうして調節した印判は、鮮明な印影が得られるものである。また、この操作もテーパー雄面とテーパー雌面の圧接固定または、解除を容易に簡単に行なうことができる。

【0030】

【図面の簡単な説明】

【図1】 本発明の実施例の一部破断面図。

【図2】 本発明の実施例の印判Aと印判Bの斜視図。

【図3】 本発明の実施例の印判Aと印判Bの一部分解

斜視図。

【図4】 本発明の実施例の印判Cの分解斜視図。

【図5】 本発明の実施例の印判Cの正面半断面図。

【図6】 本発明の実施例の印判Cの側面半断面図。

【図7】 本発明の実施例の印判Cの固定状態の説明図。

【図8】 本発明の実施例の印判Cの上方位置状態の説明図。

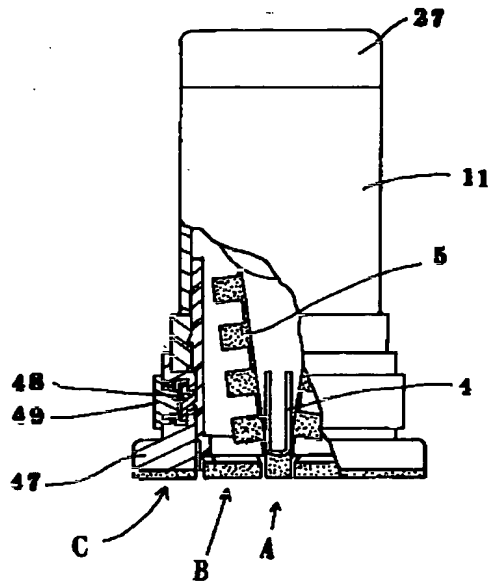
【図9】 本発明の実施例の印判Cの下方位置状態の説明図。

【図10】 本発明の実施例のテーパー雄面とテーパー雌面の圧接・分離状態の説明図。

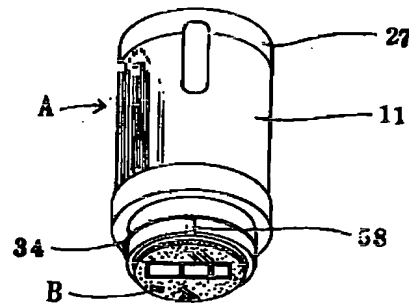
【符号の説明】

- 1 枠体
- 2 回転子
- 3 軸
- 4 支持片
- 5 無端印字ベルト
- 6 組付印字体
- 7 中継部材
- 8 支持作動部
- 9 弾性部材
- 10 本体
- 11 外装体
- 12 固定印体
- 13 支持固定部
- 14 ガイド片
- 17 誘導突起
- 19 孔
- 22 窓
- 23 開口窓
- 25 支持溝
- 26 切欠
- 27 調節部キャップ
- 29 係合足
- 30 蓋板
- 34 突部
- 41 孔
- 45 テーパー雄面
- 46 テーパー雌面
- 47 印判Cの本体
- 48 遊動部材
- 49 固定部材
- 50 切欠空間
- 51 細径部
- 52 凹部
- 53 回転支持部
- 54 回転遊動溝

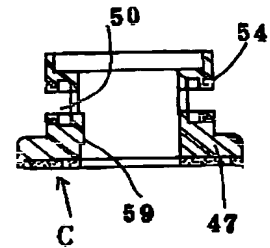
【図1】



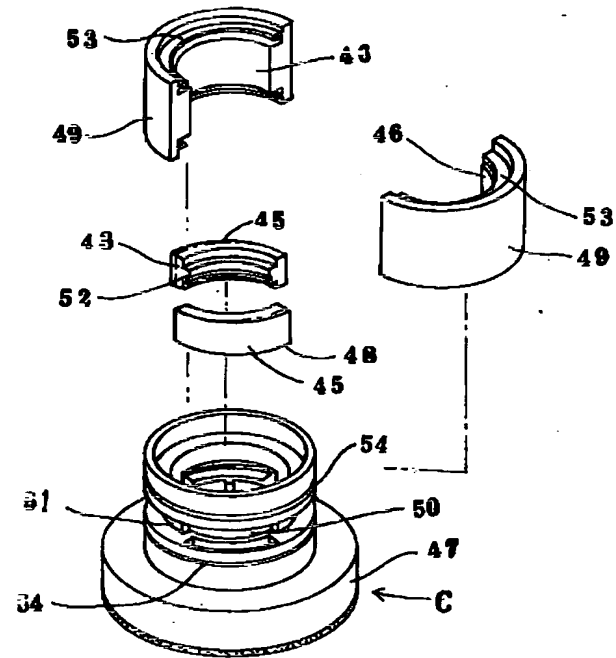
【図2】



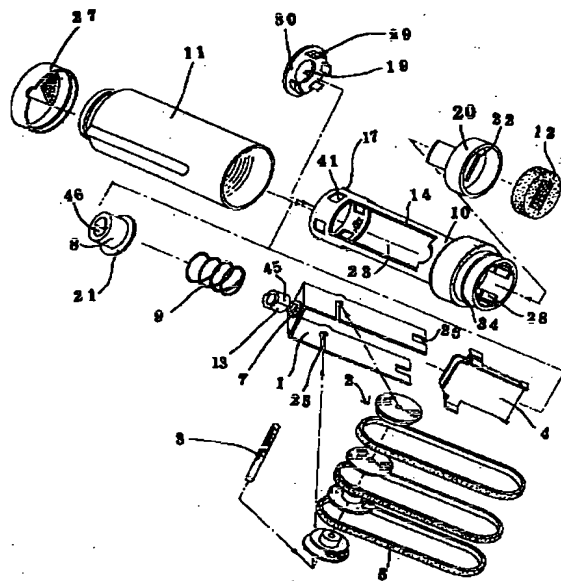
【図6】



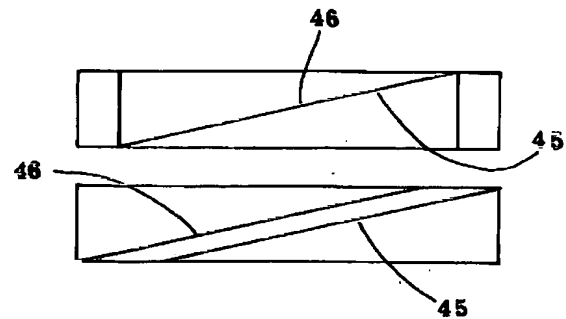
【図4】



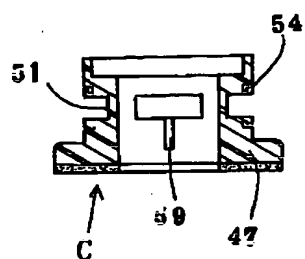
【図3】



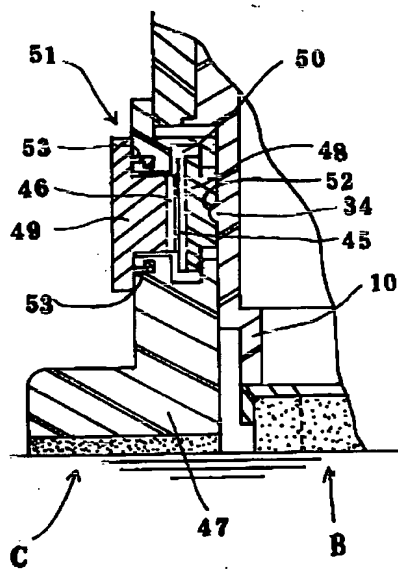
【図10】



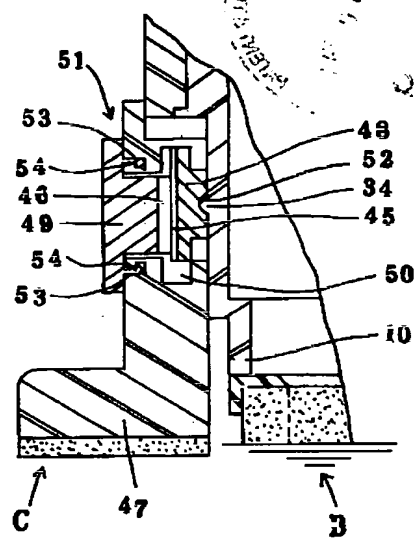
【図5】



【図7】



【図9】



【図8】

